REMBRANDT: Optimizing the national brain tumor database
Feature Story

What is the GMDI?
Dr. Howard A. Fine:
The gliomolecular diagnostic initiative or GMDI is an initiative to try to characterize several hundred or actually probably thousand primary brain tumors both at a molecular and genetic level and try to associate those genetic molecular changes with the clinical course of the patient.

What is REMBRANDT?
Dr. Fine:
Rembrandt goes well beyond being a data warehouse where we basically can download all molecular and genetic as well as clinical data from GMDI, and actually incorporates analysis tools, tools to evaluate molecular and genetic data, ways of going across platforms using DNA data and correlating it with clinical outcomes.

Why do we need GMDI and REMBRANDT?
The reason this is important is because historically and still to this day, we treat these tumors very much as a single type of tumor and although there are several different pathologic classifications, for the most part those classifications tell us very little about the prognosis for the patient and give us few leads as to how to treat them.

What are the benefits of building REMBRANDT and GMDI?
Dr. Fine:
As ultimately and most importantly a clinician who takes care of patients, it strikes me that when a patient comes to me with a given tumor diagnosis, all I can say to that individual is "you have this specific tumor type and we know that if there are 100 people like you with this tumor type, this is the best therapy on average." We all know that is ultimately not the best way to treat patients. Ultimately, the best way to treat patients is not to say that you have Tumor Y, but rather to say that you have a tumor with genetic mutations in gene XY&Z and has these molecular characteristics and we now know that for tumors with mutations in gene XY&Z and these molecular characteristics, that you need therapy AB&C, regardless of what the pathologist is calling that tumor. And GMDI and REMBRANDT is a way of getting at that in a very real time frame.

There's power in this connection.